

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for one-piece injection moulding of a soft needle catheter having a hub and a tube-shaped flexible part both formed by said one-piece injection moulding, comprising the steps of:

feeding a molten polymer into a mould having a core which is used to form an interior of said catheter, the mould and the core together defining a hub cavity to form said hub and a tube-shaped cavity having a cylindrical part to form said tube-shaped flexible part, said feeding step including using a core having a cone-shaped part that extends from the hub cavity into the tube-shaped cavity to create within said tube-shaped cavity a cone-shaped part between said hub cavity and said cylindrical part;

removing the core from the catheter when the polymer has been sufficiently cured for the core to be removed; and

removing the one-piece injection moulded soft needle catheter from the mould when the polymer has been sufficiently cured to be removed.

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2. (Previously Presented) The method according to claim 1, wherein the catheter is cured to its final state in the mould.

3. (Previously Presented) The method according to claim 1, wherein the molten polymer is supplied to the mould via at least two inlets.

4. (Previously Presented) The method according to claim 3, wherein the inlets are placed at the hub forming part of the mould.

5. (Previously Presented) The method according to claim 1, wherein the mould separates along the axis of the tube-shaped part.

6. (Previously Presented) The method according to claim 1, wherein the mould separates perpendicular to the tube-shaped part and at or just below the hub.

7. (Currently Amended) The method according to claim 1, wherein the polymer is chosen from the group consisting of polyester ethers, ~~ECDYL~~, styrene based TPE, olefin based TPE, urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

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8. (Currently Amended) The method according to claim 1, wherein the polymer is selected from the group consisting of polypropylene, ~~e-FLEX™ thermoplastic elastomers~~, mixtures of ~~e-FLEX™ thermoplastic elastomers~~ and polypropylene, ~~LUPOLEN™ 1840H, LUPOLEN™ 3020D, PELLETHANE™ 2363-75D, PELLETHANE™ 2363-55D, TECOTHANE™ and CARBOTHANE™ low density polyethylenes, and thermoplastic polyurethane elastomers.~~

9. (Previously Presented) The method according to claim 1, wherein the polymer has a shore between 40 and 60D.

10. (Previously Presented) The method according to claim 1, wherein more than one polymer is used in the method.

11. (Withdrawn) A soft needle catheter formed by one-piece injection moulding of polymer using a mould that, with a core, defines a hub cavity and a tube-shaped cavity, the core being removed from the catheter when the polymer is sufficiently cured and the catheter being removed from the mould thereafter, the catheter comprising a hub and a tube-shaped flexible part made with the mould and core, an interior of said tube-shaped part having both a cone-shaped part and a cylindrical part.

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12. (Withdrawn) The soft needle catheter according to claim 11, wherein the cylindrical part is placed at an outlet of the tube-shaped part.

13. (Withdrawn) The soft needle catheter according to claim 11, wherein the hub is fitted with means for assisting the removal of the catheter from the patient.

14. (Withdrawn) The soft needle catheter according to claim 11, wherein the hub is fitted with two carvings placed opposing each other.

15. (Withdrawn) The soft needle catheter according to claim 11, wherein the hub has means for sealing the hub to a drug delivery device, said means being provided on the outside of the hub in form of at least one round going packing, rim or fin or by having a hub with a cone shaped exterior having a size suitable to fit into a cone shaped cavity of a drug delivery device.

16. (Withdrawn) The soft needle catheter according to claim 11, wherein the tube-shaped part of the soft needle catheter has a

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ratio between the cylindrical part and the cone-shaped part in the range from 10:1 to 1:40.

17. (Withdrawn) The soft needle catheter according to claim 11, wherein the cylindrical part is 1.5 mm.

18. (Withdrawn) The soft needle catheter according to claim 11, wherein the cylindrical part is rounded.

19. (Withdrawn) The soft needle catheter according to claim 11, wherein the polymer is chosen from the group consisting of polyester ethers, ECDEL, styrene based TPE, olefin based TPE, urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

20. (Withdrawn) The soft needle catheter according to claim 11, wherein the polymer is selected from the group consisting of polypropylene, CFLEX™, mixtures of C-FLEX™ and polypropylene, LUPOLEN™ 1840H, LUPOLEN™ 3020D, PELLETHANE™ 2363-75D, PELLETHANE™ 2363-55D, TECOTHANE™ and CARBOTHANE™.

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21. (Withdrawn) The soft needle catheter according to claim 11, wherein the catheter is composed from more than one polymer.

22. (Canceled).

23. (Canceled).

24. (Currently Amended) The method according to claim ± 3, wherein the inlets are placed symmetrically around an axis of the core.